

In the Claims:

Please cancel claims 18, 22, 23, 26, 27, and ~~28-46~~.

Please amend Claims 6-10, 20, 21, 24, 25, and 28-46 as follows:

sub 7 6. (Four Times Amended) Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose [means] for emitting radiation;

[a device positioned in spaced relation to the dose means] a catheter; and

[positioning means operatively connected to said device] a positioner

providing slidable motion of the radioactive dose within the catheter, the positioner

arranged for advancing said [device and] dose [means] within the stenosed region of an artery that has been reduced by angioplasty or other procedure, said [positioning means]

positioner also being operatively connected to said [device and] dose [means] for

positioning the [device and] dose [means] between a first position and a second position,

71 wherein in the first position the dose [means] is positioned within the [stenosed region of the] artery in a non-deployed configuration and a second position wherein the dose [means] is in a deployed configuration and exposed through a window in the catheter for treating at

least a portion of the stenosed region of the artery, said [positioning means] positioner being operatively connected to said [device and] dose [means] for withdrawing said [device and] dose [means] from the artery after said radioactive dose [means] is exposed to the stenosed region for a period of time sufficient to [reduce] inhibit restenosis of the stenosed region.

7. (Amended) The apparatus of Claim 6, wherein the dose [means] is in solid form.

8. (Amended) The apparatus of Claim 6, wherein the dose [means] is in liquid form.

9. (Amended) The apparatus of Claim 6, wherein the dose [means] is in gaseous form.

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10. (Four Times Amended) Apparatus for post treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:
a radiation source; and
a catheter having at least one lumen adapted to deliver said radiation source within the stenosed region of an artery that has been reduced by angioplasty or other procedure, said catheter also being adapted to at least partially reposition relative to the radiation source for treatment when positioned within the stenosed region of an artery, the catheter being adapted to at least partially reposition to withdraw said radiation source from the artery after said radiation source is exposed to the stenosed region for a period of time sufficient to [reduce] inhibit restenosis of the stenosed region.

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20. (Twice Amended) The apparatus of Claim 6, wherein the radioactive dose [means] for emitting radiation is positioned within the [device] catheter, the [device] catheter defining a housing, wherein in the first position the dose [means] is shielded from treating the stenosed region and in the second position the housing is deployed to at least partially expose the dose [means] to the stenosed region of the artery.

21. (Twice Amended) The apparatus of Claim 20, wherein in the second deployed position a sheath is withdrawn relative to the dose [means] positioned in the stenosed region to expose the stenosed region to the dose [means].

24. (Twice Amended) The apparatus of Claim 10, wherein the catheter includes a balloon with [radioactive dose means] the radiation source for emitting radiation

incorporated into and enclosed within the material of the balloon and the balloon is expanded in the second deployed configuration positioning the balloon at least partially in contact with the stenosed region of the artery.

25. (Amended) The apparatus of Claim 24, wherein the portion of the device that is expanded includes a balloon with the [dose means] radiation source positioned on the surface of the balloon.

28. (Amended) The apparatus for post-treatment of a stenosed region of Claim 17, wherein the dose [means] is a liquid.

29. (Amended) The apparatus for post-treatment of a stenosed region of Claim 17, wherein the dose [means] is a gas.

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30. (Amended) The apparatus for post-treatment of a stenosed region of Claim 24, wherein the dose [means] incorporated into the balloon material is a solid.

31. (Amended) The apparatus for post-treatment of a stenosed region of Claim 24, wherein the dose [means] incorporated into the balloon material is a liquid.

32. (Amended) The apparatus for post-treatment of a stenosed region of Claim 24, wherein the dose [means] incorporated into the balloon material is a gas.

33. (Amended) The apparatus for post-treatment of a stenosed region of Claim [23] 6, wherein the apparatus controls the exposure of the dose [means] by controlling the radial direction and axial position of the window.

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34. (Amended) Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose [means] for emitting radiation;
a [device] catheter movable with respect to the dose [means]; and
[positioning means] a positioner configured to advance said [device] catheter and dose [means] within [the stenosed region] of an artery that has been reduced by angioplasty or other procedure, said [positioning means] positioner also configured to position the [device] catheter and dose [means] between a first position and a second position, wherein in the first position the dose [means] is positioned within [the stenosed region of] the artery in a non-deployed configuration and a second position wherein the dose [means] is in a deployed configuration and exposed through a window in the catheter for treating at least a portion of the stenosed region of the artery, said [positioning means] positioner configured to withdraw said [device] catheter and dose [means] from the artery after said radioactive dose means is exposed to the stenosed region for a period of time sufficient to [reduce] inhibit restenosis of the stenosed region.

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35. (Amended) The apparatus of Claim 34, wherein the dose [means] is in solid form.

36. (Amended) The apparatus of Claim 34, wherein the dose [means] is in liquid form.

37. (Amended) The apparatus of Claim 34, wherein the dose [means] is in gaseous form.

38. (Amended) The apparatus of Claim 34, wherein the radioactive dose [means] for emitting radiation is positioned within the [device] catheter, the [device] catheter defining a housing, wherein in the first position the dose [means] is shielded from treating the stenosed region and in the second position the housing is deployed to at least partially expose the dose [means] to the stenosed region of the artery.

73 39. (Amended) The apparatus of Claim 38, wherein in the second deployed position [a sheath] the catheter is withdrawn relative to the dose [means] positioned in the stenosed region to expose the stenosed region to the dose [means].

41. (Amended) [The apparatus of Claim 6] Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose for emitting radiation, wherein the radioactive dose [means] is incorporated into a liquid for delivery;

a catheter; and

74 a positioner providing slidable motion of the radioactive dose within the catheter, the positioner arranged for advancing said dose within the stenosed region of an artery that has been reduced by angioplasty or other procedure, said positioner also being operatively connected to said dose for positioning the dose between a first position and a second position, wherein in the first position the dose is positioned within the artery in a non-deployed configuration and a second position wherein the dose is in a deployed configuration for treating at least a portion of the stenosed region of the artery, said positioner being operatively connected to said dose for withdrawing said dose from the artery after said radioactive dose is exposed to the stenosed region for a period of time sufficient to inhibit restenosis of the stenosed region.

42. (Amended) The apparatus of Claim 10, wherein the [radioactive dose means] radiation source is incorporated into a liquid for delivery.

43. (Amended) [The apparatus of Claim 34] Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose for emitting radiation, wherein the radioactive dose [means] is incorporated into a liquid for delivery;

a catheter movable with respect to the dose; and
a positioner configured to advance said catheter and dose within of an artery
that has been reduced by angioplasty or other procedure, said positioner also configured to
position the catheter and dose between a first position and a second position, wherein in the
first position the dose is positioned within the artery in a non-deployed configuration and a
second position wherein the dose is in a deployed configuration for treating at least a
portion of the stenosed region of the artery, said positioner configured to withdraw said
catheter and dose from the artery after said radioactive dose means is exposed to the
stenosed region for a period of time sufficient to inhibit restenosis of the stenosed region.

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44. (Amended) Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose [means] for emitting radiation;

a [sheath] catheter for delivering the radioactive dose [means] to and removing the radioactive dose [means] from the stenosed region of an artery that has been reduced by angioplasty or other procedure; and

[means for moving] a positioner configured to move the [sheath] catheter and the radioactive dose [means] with respect to one another to move the radioactive dose [means] from a non-deployed and shielded position to a deployed and unshielded position, wherein the dose is exposed through a window in the catheter for a period of time sufficient to [reduce] inhibit restenosis of the stenosed region.

45. (Amended) [The apparatus of Claim 44,] Apparatus for post-treatment of a stenosed region of an artery that has been reduced by angioplasty or other procedure comprising:

a radioactive dose for emitting radiation, wherein the radioactive dose [means] is incorporated into a liquid for delivery;

a catheter for delivering the radioactive dose to and removing the radioactive dose from the stenosed region of an artery that has been reduced by angioplasty or other procedure; and

a positioner configured to move the catheter and the radioactive dose with respect to one another to move the radioactive dose from a non-deployed and shielded position to a deployed and unshielded position for a period of time sufficient to inhibit restenosis of the stenosed region.

46. (Amended) The apparatus of Claim [44] 10, wherein the radiation source provides a radiation dose to the stenosed region through a window in the catheter.

47. (New) Apparatus for treatment of a lesion site in an artery with radiation comprising:

a radioactive dose for emitting radiation, wherein the radioactive dose is incorporated into a liquid for delivery;

a catheter for delivering the radioactive dose to and removing the radioactive dose from the lesion site in the artery that has been reduced by angioplasty or other procedure; and

a positioner configured to move the catheter and the radioactive dose with respect to one another to move the radioactive dose from a non-deployed and shielded position to a deployed and unshielded position for a period of time sufficient to inhibit restenosis of the lesion site.